

## Dr. Annette Lis

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Department of Biophysics  
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### University training and degree

2001           Licence to practice as a pharmacist ("Approbation").  
1996-2001     Study of Pharmacy, Saarland University.  
1995-1996     Studies of Biology and Chemistry, Saarland University.

### Advanced academic qualifications

Doctorate:     Ph.D. in Pharmacology, Saarland University, 2005, Prof.Dr.V.Flockerzi.

### Postgraduate professional career

since 2019     Scientist, Institute of Biophysics, Saarland University.  
2013-2019     Group leader, Significance of Calcium Signaling for Aging in Lymphocytes (DFG)  
2012-2013     Scientist, Institute of Biophysics, Saarland University.  
2011-2012     Return fellowship from the German Research Association (DFG).  
2009-2011     Adjunct Assistant Professor, University of Hawaii Medical School, Department of  
Anatomy, Biochemistry and Physiology, Honolulu, Hawaii, USA.  
2005-2009     Postdoc, Laboratory of Cell and Molecular Signaling, Center for Biomedical Research,  
The Queen's Medical Center, University of Hawaii Medical School, Honolulu, Hawaii,  
USA, (Prof. Dr.R.Penner, Prof. Dr. A.Fleig).

### Miscellaneous

2011-2012     Return fellowship from the German Research Association (DFG).  
2008           Research fellowship Abroad (USA) in laboratory of Prof. Penner, Honolulu, USA.

### Selected publications

1. Zophel D, Kaschek L, Steiner R, Janku S, Chang HF, **Lis A.** (2023). Heterozygous OT-I mice reveal that antigen-specific CD8<sup>+</sup> T cells shift from apoptotic to necrotic killers in the elderly. *Aging Cell.* 2023 Mar 22:e13824. doi: 10.1111/ace1.13824. Epub ahead of print.
2. **Lis A,** Zöphel D. (2023). Elderly CD8<sup>+</sup> T cells in the focus for immunotherapeutic approaches. *Aging* (Albany NY). May 18;15(10):3899-3900. doi: 10.18632/aging.204747. Epub 2023 May 18.
3. Zophel, D, Angenendt, A, Kaschek, L, Ravichandran, K, Hof, C, Janku, S, Hoth, M, & **Lis, A.** (2022). Faster cytotoxicity with age: Increased perforin and granzyme levels in cytotoxic CD8(+) T cells boost cancer cell elimination. *Aging cell*, 21(8), e13668, doi: 10.1111/ace1.13668.
4. Angenendt, A, Steiner, R, Knorck, A, Schwar, G, Konrad, M, Krause, E, & **Lis, A.** (2020). Orai, STIM, and PMCA contribute to reduced calcium signal generation in CD8(+) T cells of elderly mice. *Aging*, 12(4), 3266-3286, doi: 10.18632/aging.102809.
5. Zophel D, Hof C, **Lis A.** 2020. Altered Ca<sup>2+</sup> Homeostasis in Immune Cells during Aging: Role of Ion Channels. *Int J Mol Sci.* Dec 24;22(1):110. doi: 10.3390/ijms22010110.

### Past and present funding (five years)

DFG LI 1750/4-1 | LI 1750/4-2  
HOMFOR

2013-2019  
2020, 2023